

The Template Pattern



Gerald Britton

Pluralsight Author

@GeraldBritton www.linkedin.com/in/geraldbritton



Overview



Travelling to New York or Amsterdam

Might take the bus

Might have to fly

Both get you from A to B

Method used is very different



Demo



Implement two modes of travel

- Bus
- Airplane



Template

Classification: Behavioral

Defines the skeleton of an algorithm

- Abstract methods
- Concrete methods
- Hooks

Subclasses can redefine steps

Algorithm step order is preserved

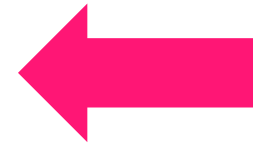
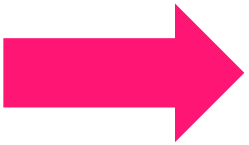
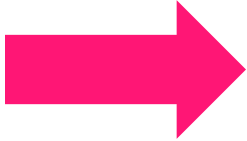
- Template method

Invariant parts are left unchanged

Reduces code duplication (DRY)



Template Pattern Structure



Demo



Refactor using the Template pattern



Consequences

Technique to reuse code

Parent class calls the subclass operations

“Don’t call us, we’ll call you”

Operations can be in the ABC

Hook operations can combine logic



Summary



Template pattern is foundational

Promotes code reuse

Implementation flexibility

- Abstract methods
- Invariant, concrete methods
- Overridable methods
- Hook operations

Template methods order the steps

Strategy pattern can work with Template

